

METHOD AND APPARATUS FOR BALANCING DISTRIBUTED APPLICATIONS

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Abstract of the Disclosure

An improved method and apparatus for balancing distributed applications within a client/server network, such as a cable television network, is disclosed. In one aspect of the 10 invention, a method of balancing the load of distributed application client portions (DACP) across various server portions (DASP) and server machines is disclosed. Statistics are maintained by one or more software processes with respect to the available resources of the servers and their loading; new process threads and/or distributed application server portions are allocated across the servers to maintain optimal system 15 performance as client device loading increases or changes. In another aspect of the invention, a novel object-oriented distributed application software architecture employing both vertical and horizontal partitions and "mutable" (i.e., transportable) objects is disclosed. The mutable objects may reside on either the server or client portions of the distributed application while maintaining at least one network partition. A runtime 20 environment adapted for the operation of the foregoing object-oriented distributed application, including an efficient message protocol useful for interprocess communication, is also disclosed. Methods for downloading the DACP from the servers, and scaling the DACP at download based on client device configuration, are further disclosed.

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